



# NOTES

ON

## DR. BACKELANDT'S

### PATENT WATER-DEVELOPING DRY PLATES.

SINCE Amateur Photography has sprung into fashion, no innovation has been more welcomed than this, which does away with the bother and expense of mixing up developers, carrying such about when touring, while at the same time chances of failure are much lessened.

The originator of these Plates is Dr. Leo Backelandt, Assistant Professor of Chemistry, at the Belgian State University, in Ghent. Dr. Backelandt was an ardent amateur, and hit upon the idea of putting the developing substance on the back of plates in such a manner that when placed in water it should dissolve, and thus form the developing bath. His great knowledge on chemical subjects helped him, not only in this, but also, and perhaps especially, in compounding that excellent film, believed to be far and away the cleanest and best film extant, and which has helped to win the Backelandt Plates such golden opinions wherever introduced.

For the purpose of manufacturing Plates according to Dr. Backelandt's invention, well-appointed works, fitted with the latest machinery for coating Plates, were put up in Ghent, and are already doing an extensive trade, manufacturing not only Water-Developing Plates, but also plates for ordinary development, chloride portrait plates, &c.

The developer on the Water-Developing Plates is hydroquinone, from which it will be gathered that there is none of that unpleasant staining of fingers caused by other developers.

The Plates are made of very high sensitiveness only, namely to indicate No. 25 on Warnercke's Sensitometer, called commonly 60 times plates. The reason why slow plates are not manufactured is, that it has been discovered that development may be retarded and altogether managed in such a way that it matters not if the Plates have been over-exposed, for they produce good negatives all the same, and consequently these Plates may be used for ordinary landscape work with most perfect success.

This is brought about by using a small quantity of sodium sulphite, a saturated solution of which should always be kept handy. Given correct exposure, nothing is required but to place the plate in the developing tray, put on water to cover, and rock until development is finished. The quantity of water need not be measured to any nicety, a little more water will simply produce a weaker developing solution, and therefore lengthen time, whereas, a lesser quantity of water would have the opposite effect. Should any one be of opinion that development with these plates, even after correct exposure, was generally too quick, he has but to make a practice of putting one or two drops of saturated sodium sulphite solution into the tray before putting the plate in and before putting water in. For landscape negatives this should always be done, and in case of over-exposure and whenever the image comes forth too quickly the adding of a few drops more of the solution will retard or arrest development, so that good negatives may be got even with 5 and 6 times over-exposure, which is not possible with any other description of plate.

It should be noticed that as the developer dissolves gradually, the bath also becomes fortified gradually, so that really the same effect is obtained as if a series of baths of increasing strength were used, and this is an important advantage in Water-Developing Plates.

Although the work with Dr. Backelandt's Plates is so extremely simple, it cannot be otherwise, than, that here and there, one will imagine that he gets better negatives in the old fashioned way, but it should be remembered that any new system requires a little experience, and therefore it may happen, though we cannot see how, that the first trial or two will not be absolutely satisfactory. One may say that development is too quick, therefore next time try with the two drops of sodium sulphite, as above described; another may have under-exposed, not duly considering the force of light at time of exposure, may therefore produce a bad negative, and, of course, rather than admit oneself in fault, the new plates are abused. Yet another may know that exposure has been correct and still find development slow—next time be careful not to use more water than just covers the plate, and don't use a half plate tray for a quarter plate, and so on. We have heard of a party complaining of plates when it was afterwards found that his camera was faulty.

We cannot recommend amateurs anything better, cheaper, and more convenient than the water-developing plates, but should any one declare in favour of the old system of development then our plates are also supplied without developer in the ordinary way, and we feel confident that the quality of film is such that that alone will recommend the plate.

At the same time we call attention to our Water-Developing Transparency Plates, with gelatino-chloride film. We supply these plates in all the ordinary sizes and at the same price as negatives. Transparencies are not much used because of the high price at which other makers have kept them or perhaps even more because of the trouble of using other developing chemicals. The effect of transparencies is excellent,



and by our system of water-development so easy of production that we strongly recommend trials with them. In like manner as development may be regulated with negatives by means of sodium sulphite, thus may our transparencies be regulated with a few grains of common salt or drops of saturated table salt solution, as per instructions supplied with each package.

Before concluding these notes the following extract of letter from a military gentleman who has tried the plates, may be of interest.

"I have tried the plates which you sent me, I find them excellent and have tested them by Warnerckes sensitometer to 23—24°, so that they are extremely sensitive.

"I have taken several negatives with the water-developing plates, and both with the instantaneous and others have I succeeded equally well. Development proceeds with wonderful regularity and without trace of foginess. Thanks to the gradual dissolution of the materials constituting the developer and fixed on the back of the plates, the bath becomes fortified by degrees so that one has development quite under control. I have employed both our ordinary hard water, rain water, and distilled water and the results are equally good so that in my opinion the choice of water is indifferent. Notwithstanding the great heat in my dark room (72°) the film has not shewn the least sign of swelling. The plates developed in water have been washed, fixed, afterwards washed for fifteen hours in running water, without going into the alum bath—and not a trace of frilling.

"I have also experimented with your ordinary plates and have used successfully pyro, hydroquinone and ferrous oxalate developers. The negatives have come out well, not a puncture and not a trace of frilling.

"The emulsion on the two kinds of plates is undoubtedly the same, it is irreproachable, as far as I have been able to judge, on about 15 plates tried.

"I have the habit of judging the delicacy of a negative by great enlargement, and have found your plates very fine and delicate.

"Your water-developing gelatine chloride plates for transparencies I have likewise tried, and they have given me very good results.

"I can say with perfect truth that your emulsion is one of the best I know of.

"In my holiday excursions I always carry my camera with me. I had given up developing my plates in the hotel room at night by a red lamp, on account of the nuisance of preparing the baths. Your water-developing plates render this operation very easy, and when going away in August I am going to provide myself with a complete outfit of your plates, &c., &c."

The *Amateur Photographer* for July 5th, 1889, contains the following:—

"Since commenting upon these plates we have had the opportunity of giving them a thorough trial. We find that the emulsion is of most

“excellent quality, is of extreme sensitiveness, and therefore fit for the  
“quickest exposures, and is reliable in every way. The self-contained  
“character of the plates—for each one carries its own developer—will  
“be a great recommendation to many amateurs who like to take their  
“pleasures easily. And we must also remember the distinct advantage  
“of not being troubled with bottles whilst on a photographic tour.  
“Water can be had everywhere, and even in a French hotel enough will  
“be found—if not for ordinary washing purposes—for developing a few  
“plates. The makers point out that as the developing agents on the  
“back of the plates dissolve slowly, development is correspondingly  
“gradual, and can be checked or accelerated by simple means. One or  
“two correspondents report that they have done good work with the  
“plates, and consider them a boon to the operator. We are glad to learn  
“that they are being taken up by photographic workers, and we wish  
“them increased success.”—*Ed. Amateur Photographer*, July 5th, 1889.

*British Trade Journal* of April 1st, 1889, says:—

“Dr. Backelandt took several photographs in our presence on over-  
“under, and properly exposed plates, and from the results we believe  
“that the method is of much practical value. We found that the  
“developer gave complete control for over exposure, and was able to  
“stop development by dry powdered sulphite of soda; in fact, the  
“over-exposed picture was arrested so quickly as to make it appear like  
“an under-exposed picture—a little powdered hyposulphite of soda, and  
“the image was fixed in a few minutes.”

In conclusion we beg to say that we shall always be thankful to  
hear results of trial and in case any difficulty is experienced, either in  
working or obtaining Dr. Backelandt's Water-Developing and other Plates;  
if you will be good enough to write to us we shall always be happy to  
assist you.

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